# 11/8/2020

# brcc keystone logo

Baton Rouge Community College

*Academic Affairs Master Syllabus*

Date Approved: 3 September 2020

Term and Year of Implementation: Spring 2021

**Course Title:** Pipefitting Level 2 Part 1

**BRCC Course Rubric:** PIPE 1216

**Previous Course Rubric**:

**Lecture Hours per week-Lab Hours per week-Credit Hours**: 2-8-6

**Per semester: Lecture Hours-Lab Hours-Instructional Contact Hours**: 30-120-150

**Louisiana Common Course Number:**

**CIP Code:** 46.0502

**Course Description:** Covers the National Center for Construction Education and Research (NCCER) Pipefitting Level 2 Modules 1 - 5: Piping Systems, Drawings and Detail Sheets, Identifying and Installing Valves, Pipefitting Trade Math, and Threaded Pipe Fabrication. Successful completion of this course requires passing the NCCER Level 2 Pipefitting Modules 1 – 5 Exams with a 70% or higher. This course requires a lab fee.

**Prerequisites:**  PIPE 1119

**Co-requisites:** None

**Suggested Enrollment Cap:** 15

**Learning Outcomes.** *Upon successful completion of this course, the students will be able to:*

1. Explain the different types of piping systems, the types and applications of pipe insulation, the materials used in threaded piping systems, the types of pipe fittings and threads, and the effects of and corrective measures for thermal expansion in piping systems.

2. Demonstrate the proper method to interpret types and parts of drawings, make field sketches, and intepret drawing indexes and line lists.

3. Demonstrate the proper method to identify valves that start, stop, and adjust flow, relieve pressure, and regulate the direction of flow.

4. Solve area, volume, circumference, and right triangle problems using the appropriate tables and formulas.

5. Demonstrate the proper method to thread and assemble piping valves, determine pipe lengths between joints, and calculate offsets.

**Assessment Measures.** Assessment of all learning outcomes will be measured using the following methods:

1. Practical demonstrations and skills performances.

2. Homework assignments, quizzes, and tests.

3. NCCER Pipefitting Level 2 Modules 1 - 5 Exams.

**Information to be included on the Instructor’s Course Syllabi:**

* ***Disability Statement*:** Baton Rouge Community College seeks to meet the needs of its students in many ways. See the Office of Disability Services to receive suggestions for disability statements that should be included in each syllabus.
* ***Grading:*** The College grading policy should be included in the course syllabus. Any special practices should also go here. This should include the instructor’s and/or the department’s policy for make-up work. For example in a speech course, “Speeches not given on due date will receive no grade higher than a sixty” or “Make-up work will not be accepted after the last day of class”.
* ***Attendance Policy*:** Include the overall attendance policy of the college. Instructors may want to add additional information in individual syllabi to meet the needs of their courses.
* ***General Policies*:** Instructors’ policy on the use of things such as beepers and cell phones and/or hand held programmable calculators should be covered in this section.
* ***Cheating and Plagiarism*:** This must be included in all syllabi and should include the penalties for incidents in a given class. Students should have a clear idea of what constitutes cheating in a given course.
* ***Safety Concerns:*** In some courses, this may be a major issue. For example, “No student will be allowed in the lab without safety glasses”. General statements such as, “Items that may be harmful to one’s self or others should not be brought to class”.
* ***Library/ Learning Resources:*** Since the development of the total person is part of our mission, assignments in the library and/or the Learning Resources Center should be included to assist students in enhancing skills and in using resources. Students should be encouraged to use the library for reading enjoyment as part of lifelong learning.

**Expanded Course Outline:**

I. Piping Systems

A. Piping Systems

B. Thermal Expansion

C. Pipe Insulation

II. Drawings and Detail Sheets

A. Identifying and Interpreting Drawings

B. Identifying Different Types of Drawings

C. Field Sketches

III. Identifying and Installing Valves

A. Valves That Start and Stop Flow

B. Valves That Regulate Flow and Pressure

C. Valves That Relieve Pressure

D. Valves That Regulate the Direction of Flow

E. Actuators

F. Installation

G. Applications

IV. Pipefitting Trade Math

A. Measuring

B. Using Tables

C. Using Formulas

D. Solving Area Problems

E. Solving Volume Problems

F. Solving Circumference Problems

G. Solving Right Triangles Using the Pythagorean Theorem

V. Threaded Pipe Fabrication

A. Threaded Piping Systems

B. Pipe Fittings

C. Screwed Fitting Joint Drawings

D. Threads

E. Determining Pipe Lengths between Fittings

F. Calculating Offsets

G. Assembly Techniques